AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A low noise down converter for satellite broadcast receiving, comprising a mixer converting a received high-frequency signal into an intermediate-frequency signal,

said mixer including:

a transistor performing frequency conversion,

a ~~PNP~~ first bipolar transistor having an emitter connected to a drain of said transistor and a collector connected to a gate of said transistor, ~~and~~

a temperature characteristic compensating circuit connected to a base of said ~~PNP~~ first bipolar transistor and ~~canceling~~ stabilizing a temperature characteristic of said ~~PNP~~ first bipolar transistor ~~to keep a collector current of said PNP bipolar transistor constant~~; and

a resistor circuit configured to adjust a rate of temperature change of a collector current of said first bipolar transistor;

wherein said temperature characteristic compensating circuit includes ~~an~~ ~~NPN~~ a second bipolar transistor having a conductive terminal connected to the base of said ~~PNP~~ first bipolar transistor, and

~~said PNP and NPN bipolar transistors are packaged into a dual transistor.~~ said resistor circuit includes a first resistance element for adjusting the collector current of said first bipolar transistor, and a second resistance element for adjusting a collector current of said second bipolar transistor.

2.-3. (canceled)

4. (currently amended) A mixer comprising:

a transistor performing frequency conversion of a received signal;

a ~~PNP~~ first bipolar transistor having an emitter connected to a drain of said transistor and a collector connected to a gate of said transistor; ~~and~~

a temperature characteristic compensating circuit for ~~canceling~~ stabilizing a temperature characteristic of the ~~PNP~~ first bipolar transistor ~~to keep a collector current of said PNP bipolar transistor constant~~, the temperature characteristic compensating circuit including ~~an NPN~~a second bipolar transistor having a conductive terminal connected to a base of said ~~PNP~~ first bipolar transistor; and

~~said PNP and NPN bipolar transistors being packaged into a dual transistor.~~a resistor circuit configured to adjust a rate of temperature change of a collector current of said first bipolar transistor, said resistor circuit including

a first resistance element for adjusting the collector current of said first bipolar transistor, and

a second resistance element for adjusting a collector current of said second bipolar transistor.

5. (currently amended) The low noise down converter according to claim 1, wherein

said temperature characteristic compensating circuit is configured to lessen a variation of said collector current of said ~~PNP~~ first bipolar transistor in accordance with

said temperature characteristic by adjusting a DC voltage applied to said base of said ~~PNP~~ first bipolar transistor according to ~~said~~ an ambient temperature.

6. (currently amended) The mixer according to claim 4, wherein

said temperature characteristic compensating circuit is configured to maintain said collector current of said ~~PNP~~ first bipolar transistor irrespective of an ambient temperature by adjusting a DC voltage applied to said base of said ~~PNP~~ first bipolar transistor according to said ambient temperature.

7. (new) The low noise down converter according to claim 1, wherein the first bipolar transistor is a PNP transistor, the second bipolar transistor is a NPN transistor, and the PNP and NPN bipolar transistors are packaged into a dual transistor.

8. (new) The mixer according to claim 4, wherein the first bipolar transistor is a PNP transistor, the second bipolar transistor is a NPN transistor, and the PNP and NPN bipolar transistors are packaged into a dual transistor.